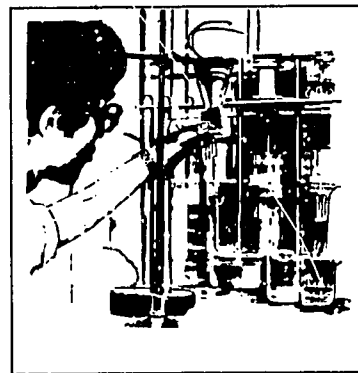
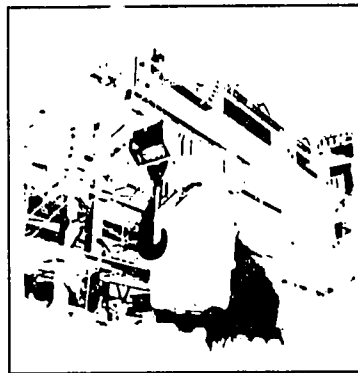
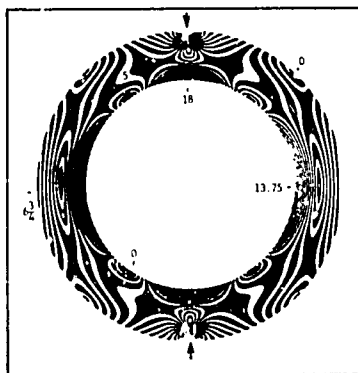
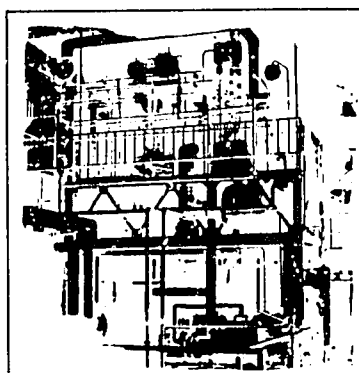


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27

**KOREA  
INSTITUTE  
OF  
SCIENCE  
AND  
TECHNOLOGY**



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The Korea Institute of Science and Technology was established to contribute to the development of industrial technology and the resultant economic growth of Korea by conducting scientific, technological and engineering economics research and technical investigations and studies and by disseminating the results of such research, investigations and examinations. During the past decade, KIST has successfully carried out its mission to fill industry's scientific and technological needs by carrying out R and D directly linked to industry in close relationship with the academic and industrial communities of the country and by maintaining a steady exchange of scientific and technological information with other countries.

The Institute has achieved a relatively high level of R and D capability through the recruitment of competent R and D staff and by creating a favorable research atmosphere with the assurance of reasonable research autonomy.

In the course of KIST's growth, during the past decade, Korea has experienced phenomenal scientific and technological development and, as a result, amazing economic growth. The country is now in the process of implementing its Fourth Five-Year Economic Development Plan designed to build up a thoroughly modernized industrial society by the early 1980's. The first three five-year plans have laid a firm foundation for the heavy and chemical industry by shifting the industrial structure from labor-intensive industry to technology-and knowledge-intensive industry to achieve its goal of an industrial society.

To keep pace with this rapid industrial growth, KIST is now confronted with the need to seek a new direction for its R and D. It must tackle long-range, large-scale tasks on the national level, such as the development of new materials and processes, new technologies related to technology-and knowledge-intensive industry, know-how for meeting energy and resource crises,

techniques for environmental preservation and health control, and regional development models to build a reservoir of technologies for the sustained development of Korean industry. It must also play the leading role in the development of peripheral technologies parallel with the development of new industries. In addition, as a national idea bank, it must assume an important role in developing software for systems development for the establishment of new industrial policy as well as carrying out R and D projects related to the development of engineering capability for the commercial application of R and D results and the modification and adaptation of imported technology.

KIST will also continue with its short-range programs such as techno-economic surveys of industry, technical counselling services for small businesses, and contract research for industry.

In its efforts to accomplish these objectives and missions, KIST hopes for the active participation of scientists and engineers both at home and abroad and cooperation from the government, and industrial and academic communities. It is especially to be hoped that industry will consider KIST as its own laboratory using it fully to achieve technological innovations for the country's industrial and economic development.

*Byong Doo Chun*

BYONG DOO CHUN  
President



May 18, 1965 The establishment of KIST was suggested in a joint communique issued by the President of the Republic of Korea and the President of the United States of America.

Feb. 3, 1966 Dr. Choi, Hyung Sup took office as president of KIST.

Feb. 4, 1966 A project agreement was signed by the R.O.K. and U.S. Governments for the establishment and operation of KIST.

Oct. 6, 1966 The ground-breaking ceremony was held.

Dec. 27, 1966 The Assistance Act for KIST was promulgated.

Oct. 23, 1969 The dedication ceremony took place.

Jun. 18, 1971 Dr. Shim, Moon Taik took office as acting president of KIST.

Feb. 1, 1972 Dr. Hahn, Sang Il took office as president of KIST.

Oct. 5, 1972 The Korea Shipping and Ferry Terminal Services (KSITS) and the Korea Ocean Research and Development Institute (KORDI) were established as KIST affiliates.

May 10, 1976 KSITS and KORDI were merged to form the Korea Institute of Ships and Oceanography (KISO).

Nov. 4, 1976 KISO, as a juridical person, became independent of KIST.

Dec. 31, 1976 The Korea Electronic Communications Research Institute (KECRI) was established as a KIST affiliate.

Dec. 10, 1978 KECRI, as a juridical person, became independent of KIST.

Mar. 17, 1978 Dr. Chun, Byong Deok took office as president of KIST.

Apr. 1, 1978 The Ocean Research and Development Institute was re-established as a KIST affiliate.

May 1, 1978 The Solar Energy Research Institute was established as a KIST affiliate.

Jun. 20, 1978 The Regional Development Research Institute was established as a KIST affiliate.

## **Research Departments**

## Material Science

Research and development in the field of material science require highly advanced, multi-disciplinary training and experience, and are therefore, beyond the capability of Korean private industry. To help relieve this situation, KIST conducts objective-oriented basic and applied research in the fields listed below.

*\*Fields of Research:*

*ceramic materials / high temperature materials / semiconductor materials / devices / electronic materials & applications / glass / building & composite materials / opto-electronic materials & devices / synthetic organic materials / their applications*

## Metallurgy and Metallurgical Engineering

Metals are the backbone of the machinery, electronic, electrical and chemical industries. Without the development of the metallurgical industry, nothing can be achieved in terms of quality and reliability, and economize on the production costs of these industries.

KIST is tackling the basic and applied problems facing the metallurgical industry, including problems in casting, melting, casting, welding, heat treatment, surface treatment, and physical properties. In addition, KIST metallurgists and engineers perform other functions as techno-economic surveys for the development of new products, process development research for the local production of metal products, technology transfer, and importing technology to be added to the local reservoir of technology, counselling services, and quality control, as well as objective oriented basic and applied research for the development of new products.

*\*Fields of Research:*

*iron & steel / non-ferrous metals & alloys / specialty steel / process metallurgy / new material development*



## Mechanical Engineering

KIST has contributed to the development of the heavy and chemical industries in Korea by developing designs and fabrication technology for vehicles, machine tools, industrial equipment, plastic processing devices, stress analysis equipment, automatic control devices and thermal equipment for local production as a means of upgrading the country's industrial structure to boost exports and develop the economy thus speeding up the industrialization process. Since 1973 KIST scientists and engineers have been providing technical counselling services for small businesses to help them solve technical problems and raise their technical level to narrow the technology gap between them and big businesses. This process has been successful in helping small businesses to reduce production costs through KIST's technical assistance, rather than through attempts to invest directly in R and D going beyond their financial and managerial strength.

### *\*Fields of Research:*

power generating equipment / thermal engines / environmental engineering equipment / hydraulic machines / combustion equipment / heating, ventilating, air conditioning & refrigeration equipment / solar energy / renewable energy utilization / machine tools / metal working / hydraulic drive equipment / automatic control systems & devices / tribology / robot engineering / lifting machinery / construction machinery & equipment / agricultural machinery / automobile engineering / transportation equipment / aerospace engineering / optical machinery / office machinery / biomechanics

## Electronics Engineering

On the basis of their contribution to the strengthening of the foundation and the international competitiveness of the electronics industry through power electronics R and D, including electronic equipment and devices, and circuitry, KIST electronic scientists and engineers are now working on projects designed to help the electronics industry shift its production from home appliances to industrial equipment.

### *\*Fields of Research:*

power-electronics / telecommunications / laser applications / measurement & instrumentation / computer applications / electronic components & materials / wave propagation & antennas / consumer products



## Chemical Engineering

KIST programs in chemical engineering include R & D for the chemical industry as well as extractive metallurgy and environmental protection. Emphasis is placed on process development for the rational exploitation of energy and material resources. A surface chemistry and an electrochemistry group also work in this area.

Previously KIST process engineers worked mainly for light industries such as those involved in the production of phosphorus chemicals, detergents, paper, and artificial sweeteners. Recently, however, stress has been shifted to heavy industries such as those producing fertilizers, aluminum, magnesium and iron, often involving high-temperature processing. Engineers have also carried out extensive R & D concerning energy resources such as coal, uranium and solar energy. KIST environmental scientists and engineers have been providing anti-pollution services for industry and local governments, and developing waste treatment processes and air-cleaning devices. Surface chemists are developing controlled-release products and catalysts, while electro-chemists have provided corrosion services for steel and processing industries. The electrochemistry group is working on energy storage and conversion and storage techniques.

*\*Fields of Research:*  
chemical process development / process development /  
extractive metallurgy / process development /  
utilization / energy technology /  
air pollution control / water resources /  
release products / catalyst developments / surface modification &  
colloidal products / anti-corrosion services /  
batteries & dry cells / electroplating

## Polymer Science

KIST polymer scientists will conduct basic and applied research on polymer synthesis and characterization, polymer processing, and polymer material development and application.

KIST keeps up with the rapidly growing Korean polymer industry, and plans on long-term, technology-intensive research on specialty polymers and petrochemical intermediates. Increasing research is expected in the areas of engineering plastics, anti-corrosion and heat resistant polymers, high resilience elastomers, polymer composites, high tenacity fibers and other specialty polymers. To cope with the expected shortage of oil, KIST also plans studies for the development of process technology to produce petrochemical intermediates (including monomers) from non-oil resources.

*\*Fields of Research:*

synthetic fibers / synthetic resins / synthetic rubber / polymer processing / polymer materials (polymer composites) / petrochemical intermediates / catalysts

## Applied Chemistry

In the area of applied chemistry, research programs are being carried out for the development of the technologies required to produce organic and inorganic chemicals and their intermediates and raw materials as well. Special emphasis is placed on technical development for the fine chemical industries. KIST applied chemists are also working on R & D for new chemical process projects.

### *\*Fields of Research:*

pharmaceuticals & pharmaceutical intermediates / agricultural chemicals & intermediates / dyestuffs & dyestuff intermediates / flavors & perfumery materials / flame retardant materials / rubber additives / plastic additives / surfactants / inorganic chemicals / heterogeneous catalysts / other organic chemicals & intermediates / silicon compounds & other organometallics

## Food & Biotechnology

Research programs in the food and biotechnology are being carried out for the conservation of conventional food resources, value enhancement of food products, the attainment of food sufficiency through the development of new food and animal feed processing. These programs, together with the development of the fermentation industry, have contributed to improvement of food and diet for the general public and to the development of biotechnology.

### *\*Fields of Research:*

food resources / traditional Korean food / food preservation / food development / agricultural / marine products / fermented products / fermentation products / industrial biotechnology / fermentation technology / waste material utilization / enzymes / antibiotics / biomedical technology / biochemical / feed / animal nutrition & physiology / feed materials / feed additives

## Process Engineering

Pilot plant testing is of great importance to the KIST R & D program not only because it scales up the bench-scale research results obtained in KIST laboratories but also because it encourages project sponsors to transfer and apply the test-proven research results to their own production lines on a commercial basis through a "show-how" of the technology involved in the research results.

A KIST pilot plant examines the technical know-how and economic feasibility of the process developed on the basis of KIST laboratory research and its own research is validated through optimum design. It also increases the reliability of research results by developing engineering data for optimum design of large industrial plants or the individual engineering design of large chemical plants.

### *\*Fields of Research:*

chemical process development (specifically, fine chemistry) /  
pilot test of chemical processes / process equipment  
development / chemical equipment design / chemical process  
engineering

## Industrial Economics

Key industries and national economic development agencies have benefited significantly from the research carried out by KIST Industrial Economics. They conduct techno-economic studies including technical consulting, advice on production, management and financing, and study on industrial feasibility. In addition, they carry out a wide range of other projects related to transportation economics, energy management, national transportation policy formulation, and management of transportation management.

### *\*Fields of Research:*

economic feasibility studies / industrial sector development  
planning / social systems development / management systems design /  
R & D planning & evaluation / regional development / urban &  
regional transportation planning / physical distribution systems  
design & planning

## **Technical Service Groups**



## Material Testing

KIST conducts various types of mechanical testing, including creep-rupture and fatigue testing, microstructural studies and non-destructive testing of metals and other materials. In addition to routine test for its own laboratories, it tests the quality of industry's products and materials, analyzes trouble shooting test results and devises ways to improve the quality of products and materials.

KIST is equipped with metallurgical microscopes, an electron microscope, an electron microprobe analyser, an electron scanning system, mechanical testers, creep-rupture testers and fatigue testing machines as well as non-destructive testing equipment.

### *\*Major Activities:*

metallurgical microscopy / electron microscopy / electron-probe microanalysis / mechanical testing / non-destructive testing

## Chemical Analysis

KIST offers various types of chemical analysis. Its analysts also provide contamination of food commodities. They have also analyzed air samples.

KIST also takes part in the Commission of the European Communities of the International Atomic Power Organization. They also analyzed at KIST.

### *\*Major Activities:*

chemical analysis / development of analytical methods / contract research on chemical analysis

## Machine Shop

New ideas and theories are tested for application to the commercial production of industrial machines through repeated experiments and pilot machine testing to reveal the technology involved in design and fabrication.

The KIST Machine Shop builds and maintains experimental instruments, applies research results and produces test products for KIST laboratories. It also provides industry with experimental access, 'know-how' services including the demonstration of labor-saving devices and industrial machines, and it designs and fabricates a wide range of industrial machinery.

*\*Major Activities:*  
development and manufacture of prototype machinery / equipment /  
high precision machining and measuring of machinery /  
manufacture of precision dies and gauges / manufacture, repair and  
calibration of electric and electronic equipment / glass blowing /  
metal finishing / heat-treatment

## Machine Designing

KIST machine designers act as a bridge between research and industry. All the results of KIST research projects are put to engineering use in commercial industrial application. The shop also provides engineering services for plant design and for the development of general purpose industrial equipment.

*\*Major Activities:*  
industrial machine design and process development / technical  
assistance to medium sized industries / industrial machinery  
development & quality improvement

## Technical Information

KIST technical information activities involve primarily:


(1) Collecting and evaluating technical information from advanced countries for use by KIST laboratories and for transfer to industry, (2) expediting information flow between KIST and industry, and (3) surveying the status of technology in industrial sector to identify its technical needs and problems.

To accomplish these purposes, KIST operates information analysis centers in important fields of science and technology. These centers process and supply technical information to KIST laboratories and to industry. KIST information specialists also work on projects specifically concerned with technical information processing and information science.

*\*Major Activities:*

*technical information processing & analysis / information systems design / techno-economic surveys / feasibility studies / patent management / patent information processing*

## Library



The Library contains more than 45,000 books and monographs on science and technology, 1,400 journals, and about 4,300 technical papers along with much standards and patent data. Most of the material is available for reference. The library supports not only research within the Institute but also serves the academic community and industry. Western-world monographs and periodicals are computerized for effective information retrieval and bibliographical control. A microfilm system simplifies information control and service.

*\*Major Activities:*

*acquisition of information / processing & organization of information / reference & special bibliographic services / reprographic & micrographic services*



## **Specialized Centers**



## Software Development Center

Two hundred experts and two powerful computers: a CDC Cyber-174 and an IBM 303Z work together around the clock to contribute to higher productivity in all areas of science, government and industry technology.

The Center has established a nationwide computer network to provide government, industry, universities and other research institutions with consultation and training services in the general computer area.

### *\*Fields of Research:*

*basic software / management of information systems / scientific & engineering computation / data base / simulation of large systems*

## Technology Transfer Center

When local industry plans to import advanced foreign technology, it faces many problems, including analyzing the appropriateness of the technology, concluding contracts with reasonable terms, getting government approval, and checking the operational efficiency of the technology. The Center takes care of all such problems on behalf of local industry.

### *\*Fields of Research:*

*consultation, guidance and arrangements for technology transfer / review of technical appropriateness of imported technology / collection, analysis, and dissemination of technical information for appropriate technology import / liaison between technology importers and local research institutes for assimilation / international technology transfer programs*

## Foundry Technology Center

The Center was established to provide the local foundry industry with technical services such as testing, surveying, technical consultation and information services. It functions as an information center for the foundry industry through exchange programs with technical organizations in advanced countries and technology transfer programs for the dissemination of information to the industry.

*\*Fields of Research:*  
technical guidance and consultation / foundry equipment training / testing and development / foundry technology research and development & dissemination of R.D. results / technical information services

## Precision Machine Center

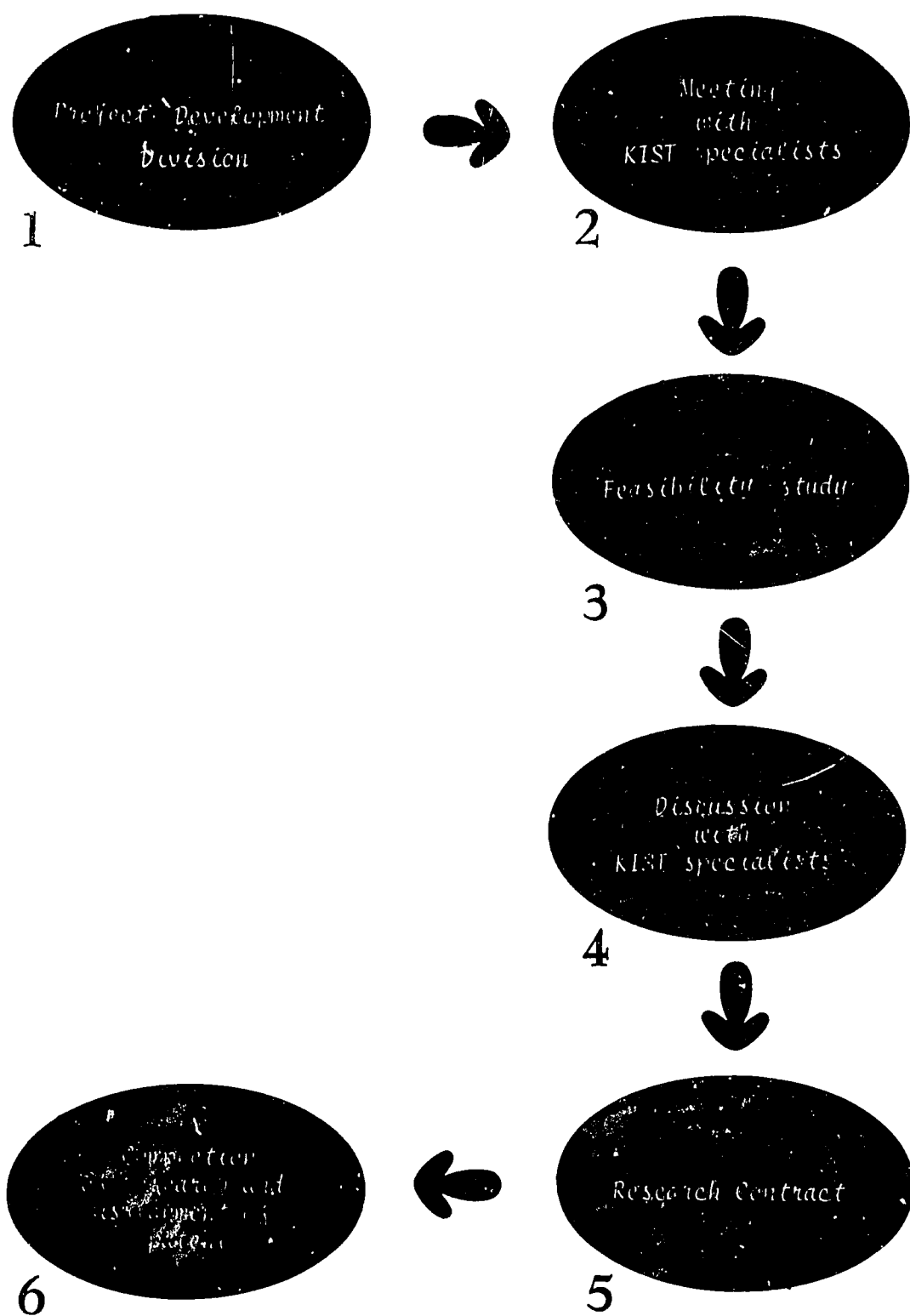
The Center's primary concern is introducing advanced precision machine technology, design and processing techniques to local industries. Its aim is to develop technical capabilities, train precision engineers, and distribute design data through testing and development of precision machine designs and manufacturing techniques.

*\*Fields of Research:*  
precision machine design / precision machining and processing technology / production process technology / precision measurement technology / automatic control technology / precision machinery engineer training

# Contract Research Procedure

*A problem presented to KIST goes through the following procedures.*

- 1 A technical problem requiring research for its solution is presented to KIST through its Project Development Division.
- 2 The Project Development Division arranges for a meeting between the client and KIST specialists in the field of the problem to define and discuss it in detail.
- 3 KIST specialists in the field of the problem and economic aspects of the problem discuss the problem in detail.
- 4 KIST specialists in the field of the problem discuss their own background and experience in detail.
- 5 If the discussion results in a decision, KIST prepares a project proposal of the discussion and presents it to the client for approval. If approved, the client enters into a research contract with KIST.
- 6 In the course of the research, KIST maintains close contact with the client and presents him with progress reports. KIST provides all information received from the contract. KIST retains the proprietary right of the research results and patents to the client.



KIST, an integrated R&D organization, carries out programs designed to provide guidelines for major government policies, including economic development planning, thus contributing to the advancement of Korea's industrial technology. It also conducts large, long-term projects jointly with other research institutes within the country. On the international front, KIST takes active part in international science and technology cooperation programs through personnel and information exchange and joint projects with 38 world-renowned technical organizations in 21 countries, including the Battelle Memorial Institute in the United States.

#### **MATERIALS TESTING**

- Metallurgical microscopy
- Electron microscopy
- Microprobe X-ray analysis
- Mechanical testing
- Non-destructive testing

#### **CHEMICAL ANALYSIS**

- Chemical analysis
- Development of analytical method
- Contract research on chemical analysis

#### **\* SPECIALIZED CENTERS**

##### **SOFTWARE DEVELOPMENT CENTER**

- Development of basic software  
(Development and dissemination of basic software, operating system, compiler and etc.)
- Development of application software
- Development and dissemination of technology for sharing of data and programs among different computers
- Development of software for numerical control and plant operation
- Dissemination of technology for efficient operation of computer
- Dissemination of new computer technologies
- Consulting and introduction of the various software packages
- Education and training
- Miscellaneous (Planning, evaluation and etc.)

##### **TECHNOLOGY TRANSFER CENTER**

- Consultation, guidance and arrangement for technology transfer
- Review of relevance of technology to be transferred
- Acting as agent for technology transfer
- Promotion of group technology transfer for medium industries
- Analysis, evaluation, accumulation and dissemination of technical information for appropriate technology transfer
- Assimilation and/or improvement of imported technology
- Follow-up services for imported technology

##### **FOUNDRY TECHNOLOGY CENTER**

- Technical guidance and consulting
- Training of foundry engineers
- Testing services
- Development of foundry technology and its dissemination
- Technical information services

##### **PRECISION MACHINE CENTER**

- Precision machine design
- Precision machining and processing technology
- Production process technology
- Precision measuring technology
- Automatic control technology
- Providing training course for precision engineers

# **KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY**



Address: P.O. Box 131 Dongdaemun, Seoul, Korea  
Phone: 967 8801, 8901, 0121  
Cable: KISTROK Telex KISTROK K27380



The Korea Institute of Science and Technology (KIST) was established in February 1966 under an agreement between the Korean and United States governments covering the need for upgrading technological levels in Korea, thus meeting the requirements of both government and industry in an era of rapid change and advance.

The activities of KIST include research projects encompassing a wide range of applied science and industrial technology; technoeconomic surveys; technical assistance activities; and dissemination of accumulated technological knowledge for public use.

As a financial corporation, KIST is a non-profit, independent research organization which is attaching much importance to the autonomy of its operations.

The principal activities of KIST are based on contract research, which is also the major source of revenues. Clients include both private industries and government organizations in Korea and other countries.

Research is carried out on a multi-disciplinary coordinating system which calls for not only in-house cooperation among various laboratories but also close contact with the domestic and overseas academic community. Thus KIST maintains close ties with other R & D institutions all over the world, including the Battelle Memorial Institute.

The KIST compound is located on a wooded 65-acre site in the eastern section of Seoul, and consists of a total floor space of 500,000 sq ft. The staff numbers 1,000 of whom half are professional scientists and engineers, staffing 47 laboratories in twelve research groups covering virtually the entire spectrum of modern industrial technology: polymer engineering, chemical

engineering, organic chemistry, applied chemistry, food and biotechnology, pilot plant, environmental engineering, electronic engineering, materials science, mechanical engineering, metallurgy and metallurgical engineering, industrial economics and others.

KIST also includes such specialized centers as the Software Development Center, the Technology Transfer Center, the Foundry Technology Center, and the Precision Machine Center. It has recently established the Electronic Communication Research Institute as an affiliate which is expected to become independent in due course of time.

Support units include the Technical Information Department, the Machine Shop, the Machine Engineering Laboratory, the Materials Testing Laboratory, the Chemical Analysis Laboratory and the Library.

In the past decade, KIST has successfully carried out a total of 1,600 research contracts; in 1976 alone, it completed 260 contracts with a total volume of U.S. \$7,600,000 accruing therefrom.

KIST has been growing in the past 10 years with the innovative developments in Korea's industry and economy, in a close correlation. A strong thrust of KIST to industry and its kick-back in the form of contract research to the former have certainly done a big portion in Korea's industrialization efforts.

Now, the Korean economy, strongly boosted by industrial development, is looking toward a highly industrialized society based on heavy and chemical industries in the 1980's of great promise. Accordingly, the nation's industrial structure as well is changing from a mere labor-intensive to technology—or knowledge—intensive type.

In keeping abreast of this change in the Korean economy and industry, KIST is seeking a new direction in its research and development. KIST will, in the years to come, play a precursor role in carrying out large, long-term national projects, such as utilization of domestically available resources, research on food increase, development of technology-intensive products, etc.

It will also play an important role, as a national braintrust, in software development including systems development in support of national industry policy formulation. It will further endeavor to build up engineering capabilities, promote commercialization of developed technologies, introduce advanced, foreign technologies, etc.

KIST will, of course, continue to perform short-term technical development and technical services which it has thus far done in support of industry.



President :	Hahn, Sang Joon
Vice President, Development :	Yang, Jae Hyun
Vice President, Research I :	Kwon, Tai Wan
Vice President, Research II :	Suh, Jin Bum

Our research managers and their associates offer high standards of ability and leadership in helping to meet the problem-solving goals of the Institute's clients. The talents and energies of our staff are the sole basis for KIST's recorded accomplishments, as well as for those that lie ahead.

Research teams at the Institute apply a wide range of professional knowledge toward the solution of specific problems. Upon completion of a specific research project, follow-up services are available to insure successful application.

All concerning the conduct of a research contract is kept absolutely confidential, and any interests including patents and/or know-how being generated from the execution of the contract go to the sponsor concerned.

For domestic sponsors, financial incentives exist in the form of tax exemptions for the research fund.

**KIST is always ready to work for you.**

**You will be served in the areas listed below—**

- Development of new products, new materials, and new processes
- Transfer of advanced technology
- Technical and economic feasibility studies
- International technical information
- Providing new ideas
- Technical training

**KIST is your trouble shooter.**

**KIST is your problem solver.**

**KIST is your brain trust corps.**

No problem is too small for you to give to KIST.

KIST welcomes whatever technical problems you have, small or big, long term or short term.

**Please write or contact now**

**KIST PROJECT DEVELOPMENT DEPARTMENT**

Address : P.O. Box 131, Dongdaemun, Seoul, Korea  
 Phone : 967-8801, 8901 (Extension 242, 243)  
 Cable : KISTROK / Telex : KISTROK K27380

# FIELDS OF RESEARCH

---

## POLYMER ENGINEERING

- Synthetic fibers
- Synthetic resins
- Synthetic rubber
- Natural polymers

## CHEMICAL ENGINEERING

- Chemical process development
- High temperature & pressure processes development
- Chemical engineering equipment development
- Resources utilization technology development
- Metallurgical process development
- Energy engineering

## ORGANIC CHEMISTRY

- Agricultural chemicals
- Organic products
- Pharmaceuticals
- Dye stuff pigment materials • Intermediaries
- Aromatics

## APPLIED CHEMISTRY

- Pharmaceuticals
- Organic chemicals
- Inorganic chemicals
- Flame retardant materials
- Agricultural chemicals

## FOOD & BIOTECHNOLOGY

- Food resources
- Traditional Korean food
- Agricultural and marine products
- Fermented food
- Industrial microbiology
- Feed resources
- Food process development
- Waste utilization
- Enzymes
- Antibiotics
- Biochemicals
- Animal nutrition
- Fermentation technology

## PILOT PLANT

- Design of chemical process equipment
- Pilot test
- Prototype equipment development
- Environmental survey
- Pollution and industrial installation

## ENVIRONMENTAL ENGINEERING

- Industrial water quality management
- Water resources management
- Municipal waste management
- Air quality management

## ELECTRONIC ENGINEERING

- Computer application system
- Process control system
- Transmission for communications
- Electronics circuit
- Power electronics
- Electronic instrument
- Industrial instrumentation
- Laser application

## MATERIALS SCIENCE

- Semiconductor materials
- Semiconductor devices
- Electronic materials
- Ceramic materials
- High temperature materials
- Glass
- Building materials

## MECHANICAL ENGINEERING

- Automobile engineering
- Machine tools
- Industrial machinery
- Metal working
- Automatic control systems and devices
- Thermal engine
- Process machinery
- Power generation equipment
- Combustion equipment
- Mining machinery
- Turbo-machine
- Solar energy utilization

## METALLURGY AND METALLURGICAL ENGINEERING

- Ferrous materials
- Specialty steel
- Non-ferrous metals and alloys
- Process metallurgy
- Process development
- New materials development

## INDUSTRIAL ECONOMICS

- Economic feasibility studies
- Management systems design
- R & D planning and evaluation
- Regional development
- Transport planning, urban and regional
- Physical distribution systems design and plan
- Industrial sector development planning
- Social systems development

## TECHNICAL INFORMATION

- Technical information processing and analysis
- Information systems design
- State-of-the-art survey
- Patent management

## MACHINE SHOP

- Development and manufacturing of prototype machinery and equipment
- High precision machining and measuring of machinery parts
- Manufacturing of precision die and gauge
- Manufacturing, repair and calibration of electric and electronic equipment
- Glass blowing
- Surface finishing and heat-treatment

## MACHINE ENGINEERING

- Design of industrial machines and process improvement
- Technical guidance to medium industries
- Development and quality improvement of industrial machinery

## BOARD OF TRUSTEES

Chairman	:	Lim, Suk Chun
Vice Chairman	:	Choi, Sang Up
Trustee	:	Lee, Chang Suk
Trustee	:	Suh, Suk Joon
Trustee	:	Bae, Sang Wook
Trustee	:	Lee, Min Ha
Trustee	:	Park, Tae Joon
Trustee	:	Choh, Soon Tahk
Trustee	:	William E. Paupe
Trustee	:	Sherwood L. Fawcett
Trustee	:	Chun, Byong Doo
Auditor	:	Han, Jun Sok
Secretary General:		Rhee, Chan Juh

## EXECUTIVES

President	:	Chun, Byong Doo
Vice President for Research	:	Kwon, Tai Wan
Vice President for Technical Services:		Park, Won Hee
Vice President for Administration	:	Rhee, Chan Juh
Vice Chairman, Management Planning & Control Committee	:	Yun, Yeo Gyeong

